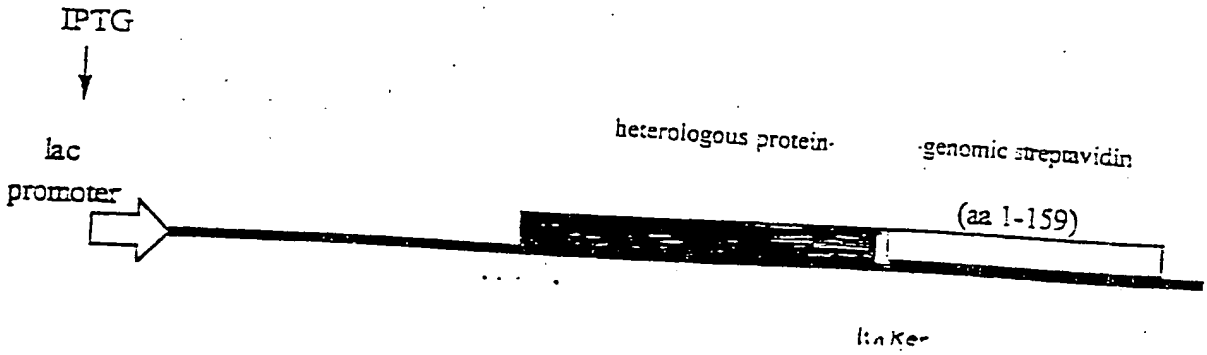


Figure 1

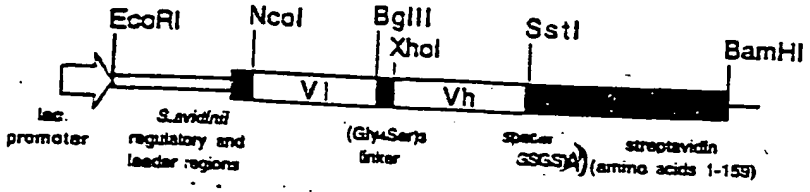


Figure 2

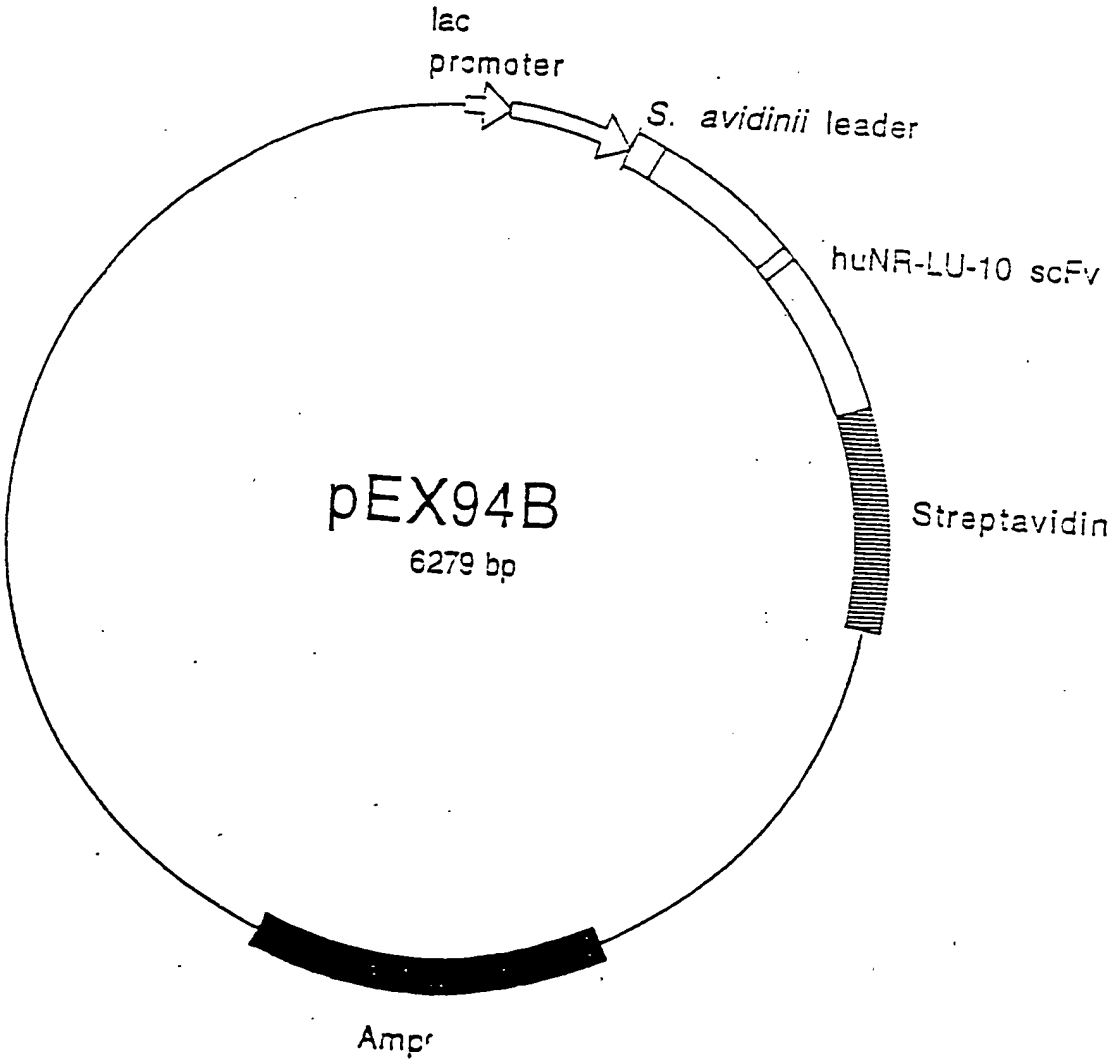


Figure 3

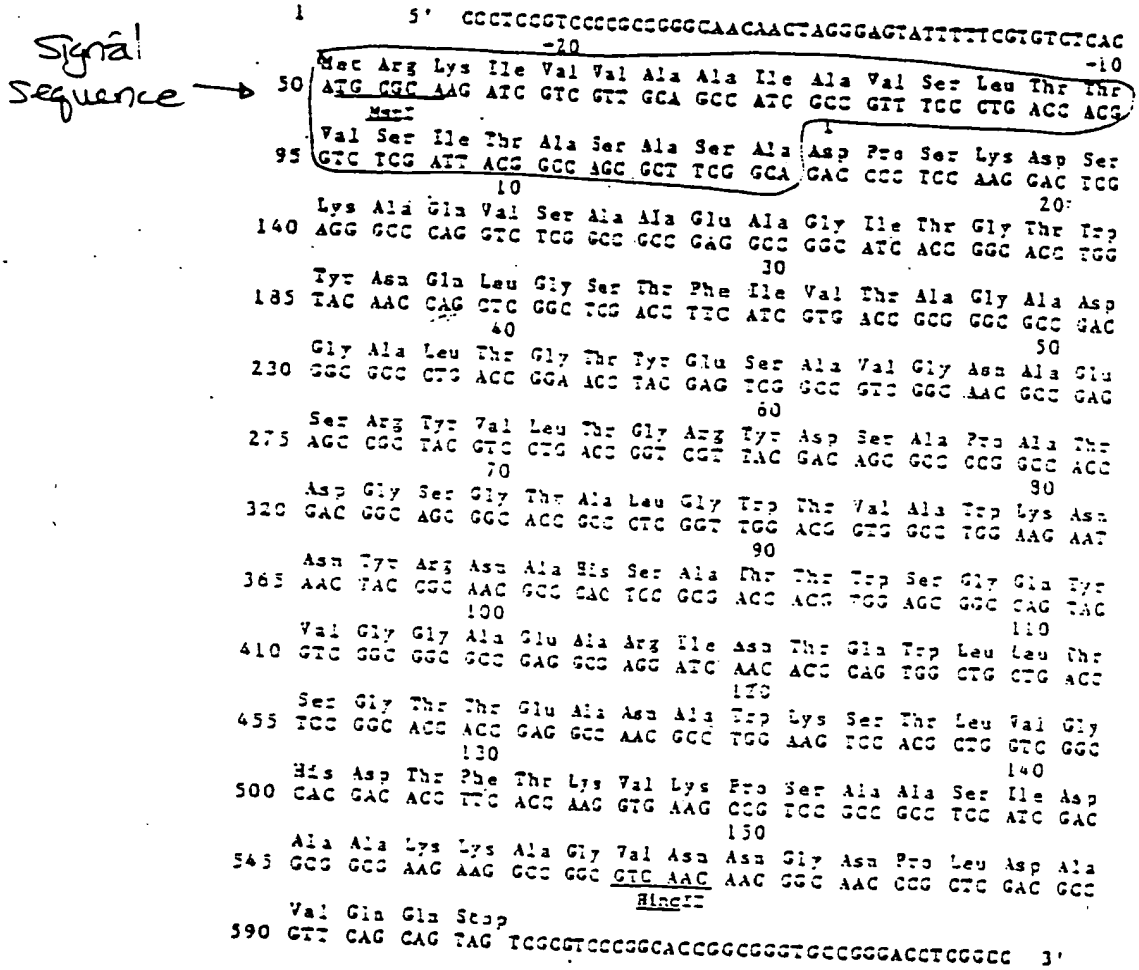


Figure 4

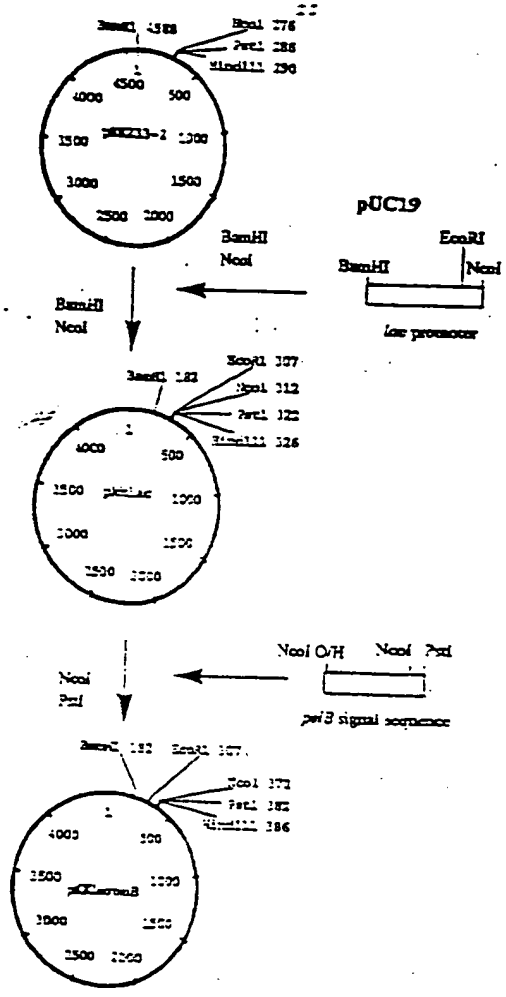


Figure 5

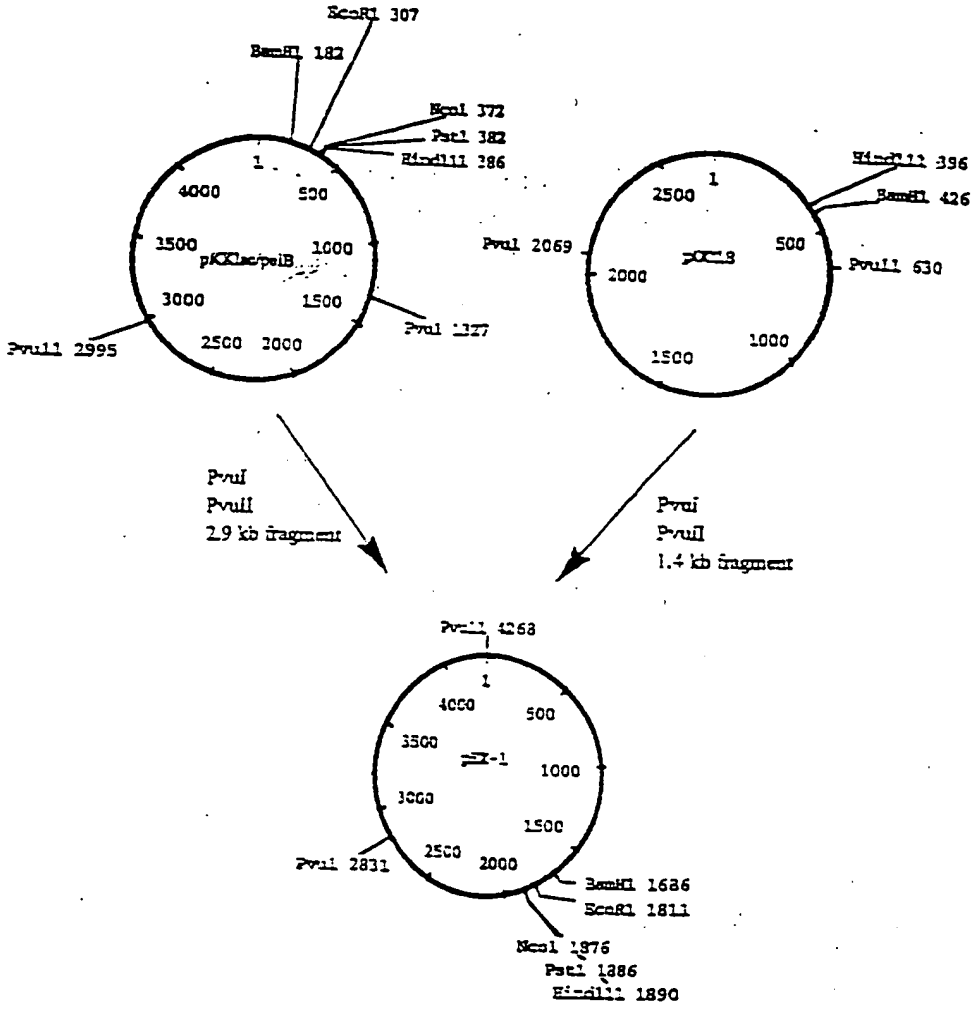


Figure 6

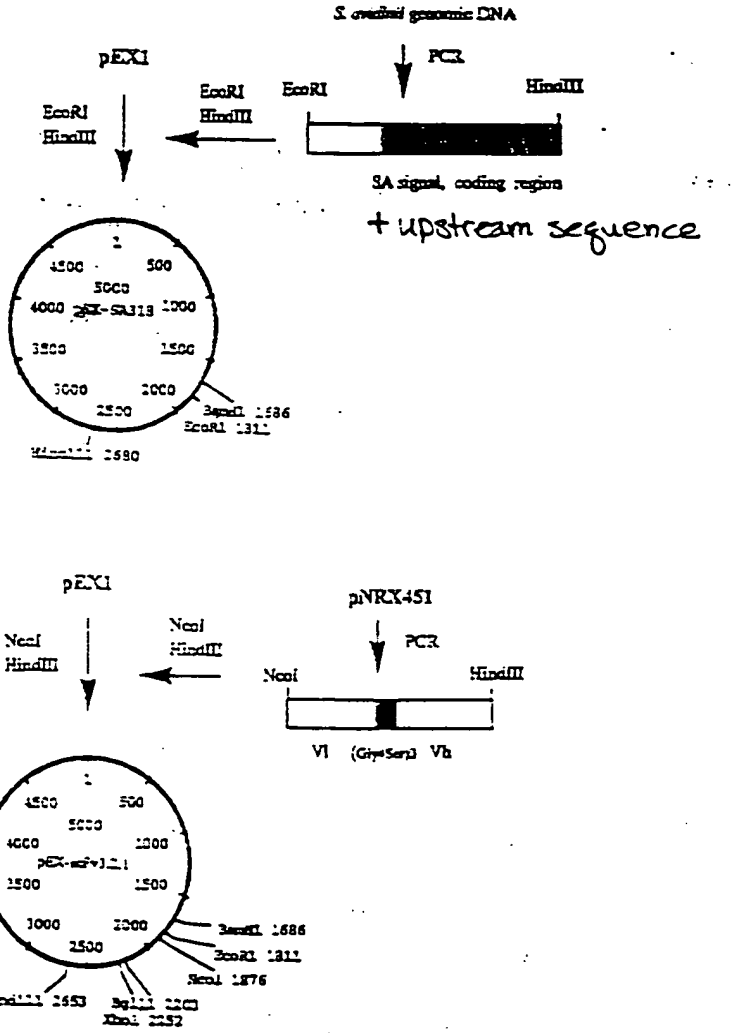


Figure 7

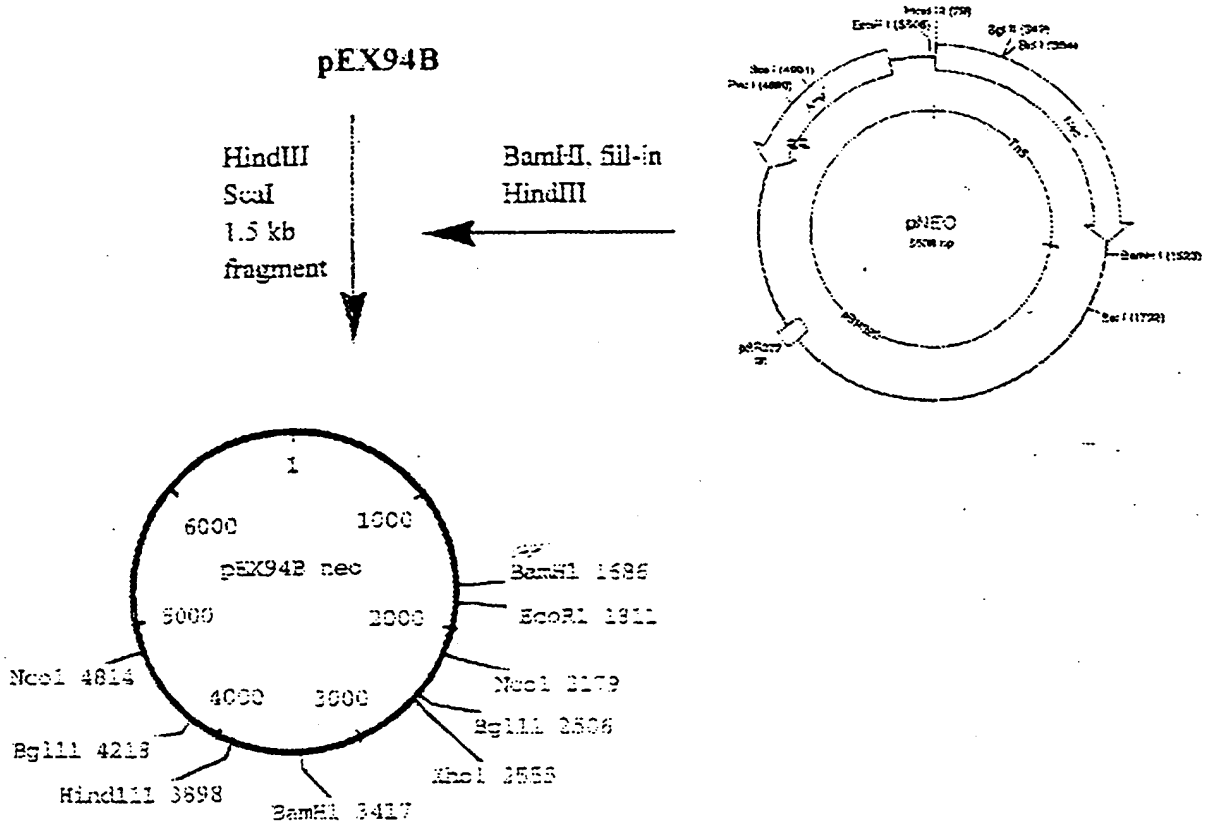


Figure 9

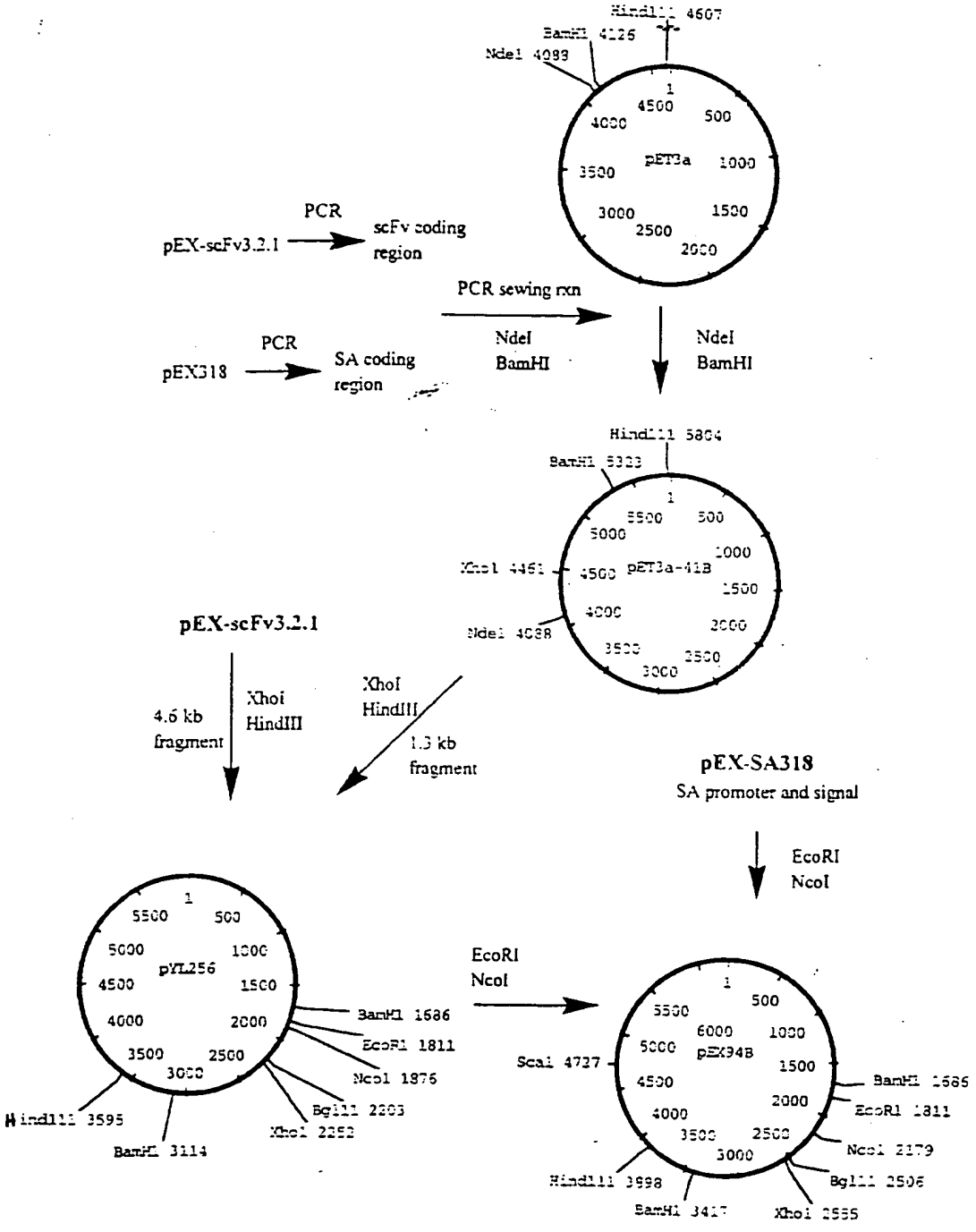


Figure 8

Figure 10

pEX94B EcoRI-BamHI fragment

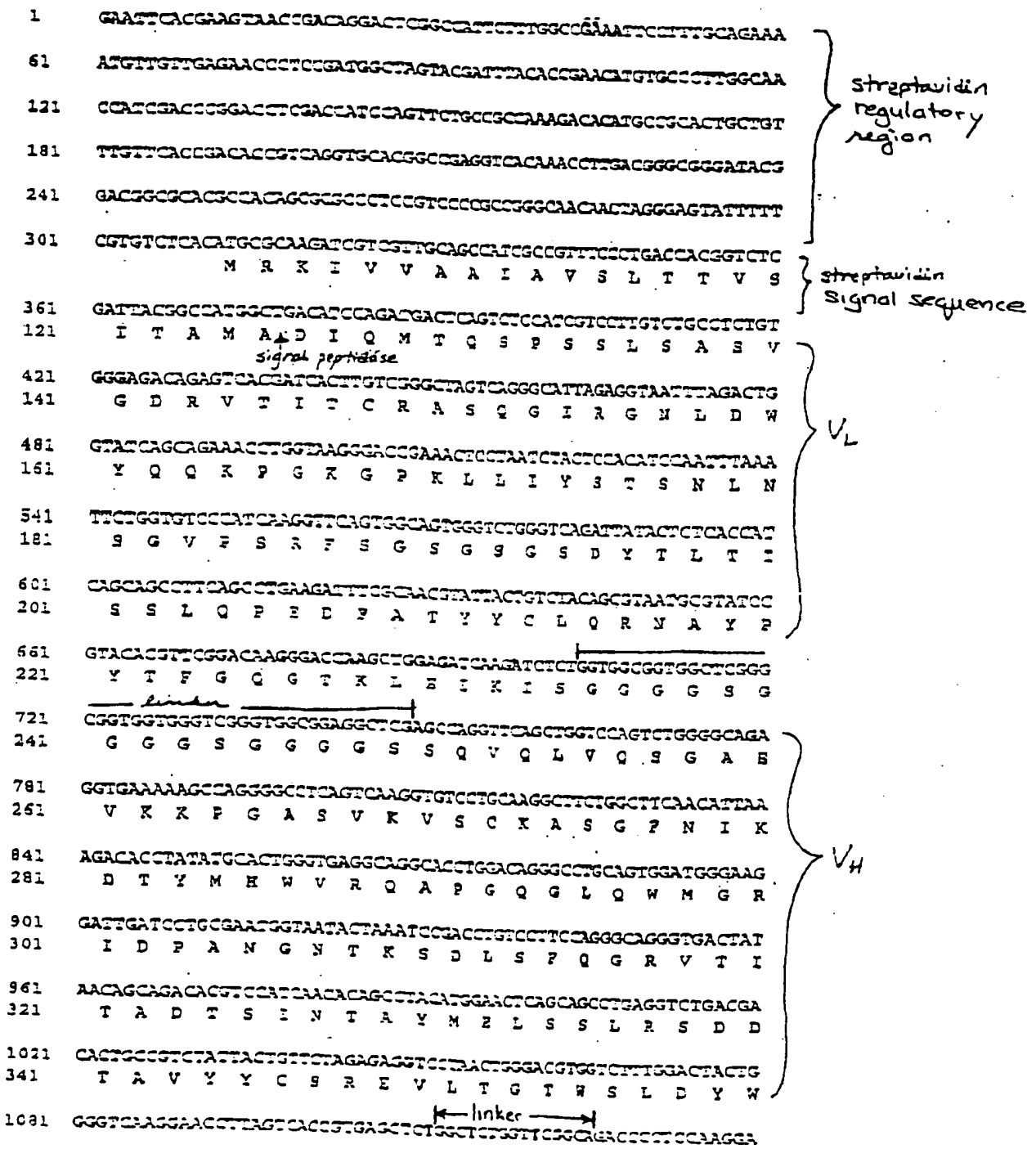
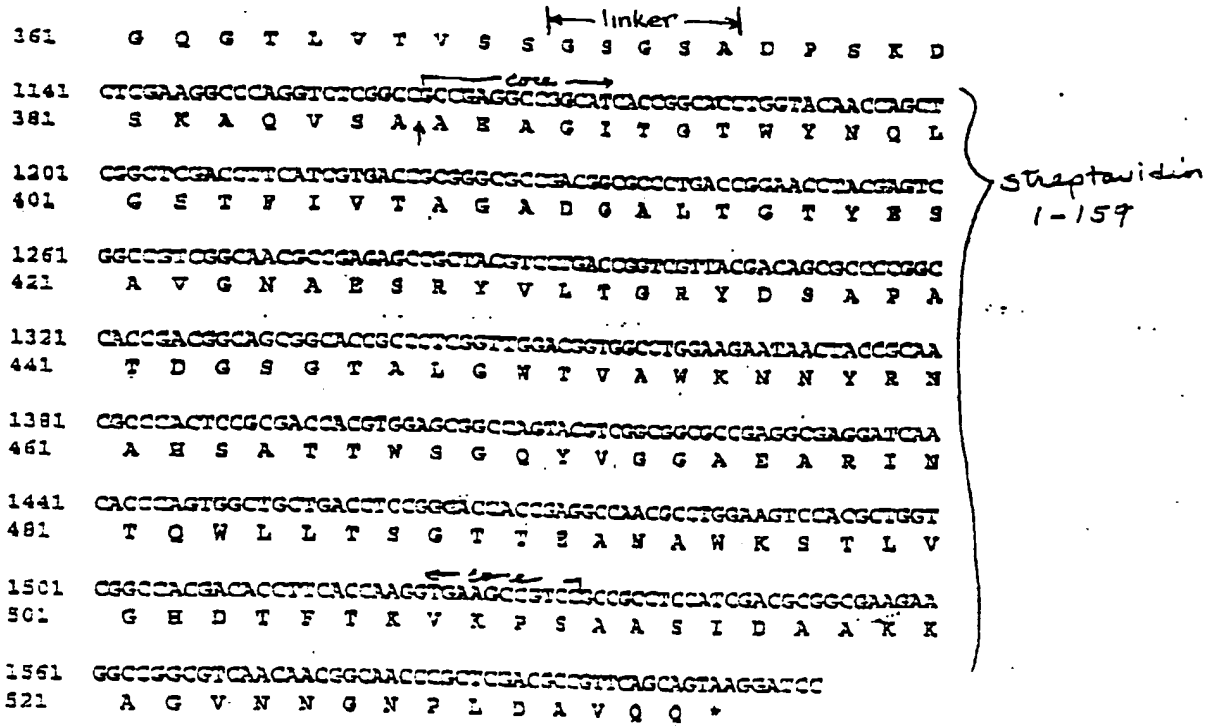


Figure 10 Cont.



GACATCGTGC TGTCGCAGTC TCCAGCAATC CTGTCTGCAT CTCCAGGGGA GAA
GGTCACAATG [redacted]TGCAGGG CCAGCTCAAG TGTAAGTTAC A[redacted]CTGGT ACCAGCAGAA
GCCAGGATCC [redacted]CCCAAAC CCTGGATTTA TGCCACATCC A[redacted]GGCTT CTGGAGTCCC
TGCTCGCTTC [redacted]GGCAGTG GGTCTGGGAC CTCTTACTCT CTCRCAATCA GCAGAGTGGA
GGCTGAAGAT GCTGCCACTT ATTACTGCCA GCAGTGGATT AGTAACCCAC CCACGTTCGG
TGCTGGGACC AAGCTGGAGC TGAAGATCTC TGGTCTGGAA GGCAGCCCGG AAGCAGGTCT
GTCTCCGGAC GCAGGTTCCG GCTCGAGCCA GGTTCAGCTG GTCCAGTCAG GGGCTGAGCT
GGTGAAGCCT GGGGCCTCAG TGAAGATGTC CTGCAAGGCT TCTGGCTACA CATTTACCAG
TTACAATATG CACTGGGTAA AGCAGACACC TGGACAGGGC CTGGAATGGA TTGGAGCTAT
TTATCCAGGA AATGGTGATA CTTCCTACAA TCAGAAGTTC AAAGGCAAGG CCACATTGAC
TGCAGACAAA TCCTCCAGCA CAGCCTACAT GCAGCTCAGC AGCCTGACAT CTGAGGACTC
TGCGGTCTAT TACTGTGCAA GAGCGCAATT ACGACCTAAC TACTGGTACT TCGATGTCTG
GGGCGCAGGG ACCACGGTCA CCGTGAGCTC TGGCTCTGGT TCGGCAGACC CCTCCAAGGA
CTCGAAGGCC CAGGTCTCGG CCGCCGAGGC CGGCATCACC GGCACCTGGT ACAACCAGCT
CGGCTCGACC TTCATCGTGA CCGCGGGCGC CGACGGCGCC CTGACCGGAA CCTACGAGTC
GGCCGTCGGC AACGCCGAGA GCCGCTACGT CCTGACCGGT CGTTACGACA GCGCCCCGGC
CACCGACGGC AGCGGCACCG CCCTCGGTTG GACGGTGGCC TGGAAGAATA ACTACCGCAA
CGCCCACTCC GCGACCACGT GGAGCGGCCA GTACGTCGGC GGCGCCGAGG CGAGGATCAA
CACCCAGTGG CTGCTGACCT CCGGCACCAC CGAGGCCAAC GCCTGGAAGT CCACGCTGGT
CGGCCACGAC ACCTTCACCA AGGTGAAGCC GTCCGCCGCC TCCATCGACG CGGCGAAGAA
GGCCGGCGTC AACAACGGCA ACCCGCTCGA CGCCGTTCAG CAGTAA

11A

Translation of B9E9pKOD scFvSA

Figure 11B

DIVLSQSPAIL SASPGEKVTM TCRASSSVSY MHWYQQKPGS SPKPWIYATS NLASGVPARF V_L
SGSGSGTSYS LTISRVEAED AATYYCQQWI SNPPTFGAGT KLELKISGLE GSPEAGLSPD pKOD
AGSGSSQVQL VQSGAELVKP GASVKMSCKA SGYTFTSYNM HWVKQTPGQG LEWIGAIYPG V_H
NGDTSYNQKF KGKATLTADK SSSTAYMQLS SLTSEDSAVY YCARAQLRPN YWYFDVWGAG LINKER 2
TTVTVSSGSG SADPSKDSKA QVSAAEAGIT GTWYNQLGST FIVTAGADGA LTGTYESAVG SA
NAESRYVLTG RYDSAPATDG SGTALGWTVA WKNNYRNAHS ATTWSGQYVG GAEARINTQW
LLTSGTTEAN AWKSTLVGHD TFTKVKPSAA SIDAAKKAGV NNGNPLDAVQ Q*

Figure 11C

R31-2-20 plasmid: NcoI-BamHI fragment containing B9E9 Vh-*linker*-Vl-SA gene

```
1     CCATGGCTCAGGTTCAGCTGGTCCAGTCAGGGGCTGAGCTGGTGAAGCCTGGGGCCTCAG
1       M  A  Q  V  Q  L  V  Q  S  G  A  E  L  V  K  P  G  A  S  V

61    TGAAGATGTCCTGCAAGGCTTCTGGCTACACATTTACCAGTTACAATATGCACTGGGTAA
21      K  M  S  C  K  A  S  G  Y  T  F  T  S  Y  N  M  H  W  V  K

121   AGCAGACACCTGGACAGGGCCTGGAATGGATTGGAGCTATTTATCCAGGAAATGGTGATA
41      Q  T  P  G  Q  G  L  E  W  I  G  A  I  Y  P  G  N  G  D  T

181   CTTCCTACAATCAGAAGTTCAAAGGCAAGGCCACATTGACTGCAGACAAATCCTCCAGCA
61      S  Y  N  Q  K  F  K  G  K  A  T  L  T  A  D  K  S  S  S  T

241   CAGCCTACATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAA
81      A  Y  M  Q  L  S  S  L  T  S  E  D  S  A  V  Y  Y  C  A  R

301   GAGCGCAATTACGACCTAACTACTGGTACTTCGATGTCTGGGGCGCAGGGACCACGGTCA
101     A  Q  L  R  P  N  Y  W  Y  F  D  V  W  G  A  G  T  T  V  T

361   CCGTGAGCAAGATCTCTGGTGGCGGTGGCTCGGGCGGTGGTGGGTCGGGTGGCGGCGGCT
121     V  S  K  I  S  G  G  G  G  S  G  G  G  G  S  G  G  G  G  S
                                  <-- linker --->

421   CGGGTGGTGGTGGGTCGGGCGGCGGCGGCTCGAGCGACATCGTGCTGTCGCAGTCTCCAG
141     G  G  G  G  S  G  G  G  G  S  S  D  I  V  L  S  Q  S  P  A
      ------------------------------>

481   CAATCCTGTCTGCATCTCCAGGGGAGAAGGTCACAATGACTTGCAGGGCCAGCTCAAGTG
161     I  L  S  A  S  P  G  E  K  V  T  M  T  C  R  A  S  S  S  V

541   TAAGTTACATGCACTGGTACCAGCAGAAGCCAGGATCCTCCCCCAAACCCTGGATTTATG
181     S  Y  M  H  W  Y  Q  Q  K  P  G  S  S  P  K  P  W  I  Y  A

601   CCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
201     T  S  N  L  A  S  G  V  P  A  R  F  S  G  S  G  S  G  T  S

661   CTTACTCTCTCACAATCAGCAGAGTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC
221     Y  S  L  T  I  S  R  V  E  A  E  D  A  A  T  Y  Y  C  Q  Q

721   AGTGGATTAGTAACCCACCCACGTTCGGTGCTGGGACCAAGCTGGAGCTGAAGAGCTCTG
241     W  I  S  N  P  P  T  F  G  A  G  T  K  L  E  L  K  S  S  G
                                                                <--

781   GCTCTGGTTCGGCAGACCCCTCCAAGGACTCGAAGGCCCAGGTCTCGGCCGCCGAGGCCG
261     S  G  S  A  D  P  S  K  D  S  K  A  Q  V  S  A  A  E  A  G
        ---linker--->

841   GCATCACCGGCACCTGGTACAACCAGCTCGGCTCGACCTTCATCGTGACCGCGGGCGCCG
281     I  T  G  T  W  Y  N  Q  L  G  S  T  F  I  V  T  A  G  A  D

901   ACGGCGCCCTGACCGGAACCTACGAGTCGGCCGTCGGCAACGCCGAGAGCCGCTACGTCC
301     G  A  L  T  G  T  Y  E  S  A  V  G  N  A  E  S  R  Y  V  L

961   TGACCGGTCGTTACGACAGCGCCCCGGCCACCGACGGCAGCGGCACCGCCCTCGGTTGGA
321     T  G  R  Y  D  S  A  P  A  T  D  G  S  G  T  A  L  G  W  T
```

V_H

V_L

Streptavidin

```
1021  CGGTGGCCTGGAAGAATAACTACCGCAACGCCCACTCCGCGACCACGTGGAGCGGCCAGT
341     V  A  W  K  N  N  Y  R  N  A  H  S  A  T  T  W  S  G  Q  Y

1081  ACGTCGGCGGCGCCGAGGCGAGGATCAACACCCAGTGGCTGCTGACCTCCGGCACCACCG
361     V  G  G  A  E  A  R  I  N  T  Q  W  L  L  T  S  G  T  T  E

1141  AGGCCAACGCCTGGAAGTCCACGCTGGTCGGCCACGACACCTTCACCAAGGTGAAGCCGT
381     A  N  A  W  K  S  T  L  V  G  H  D  T  F  T  K  V  K  P  S

1201  CCGCCGCCTCCATCGACGCGGCGAAGAAGGCCGGCGTCAACAACGGCAACCCGCTCGACG
401     A  A  S  I  D  A  A  K  K  A  G  V  N  N  G  N  P  L  D  A

1261  CCGTTCAGCAGTAAGGATCC
421     V  Q  Q  *  G  S
```

FIG. 11C CONTINUED

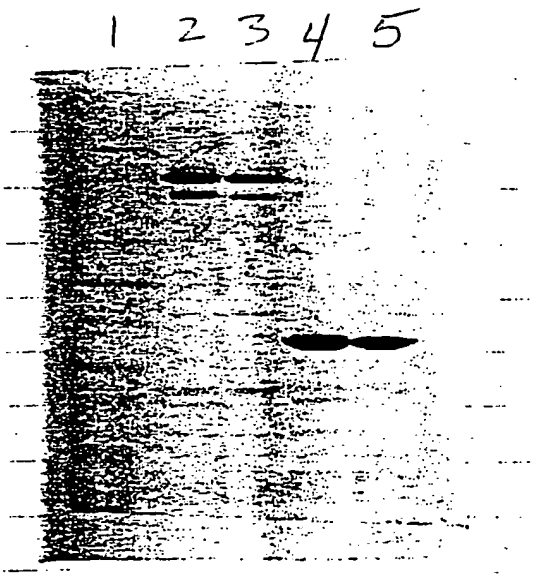


FIG. 12

Size Exclusion HPLC

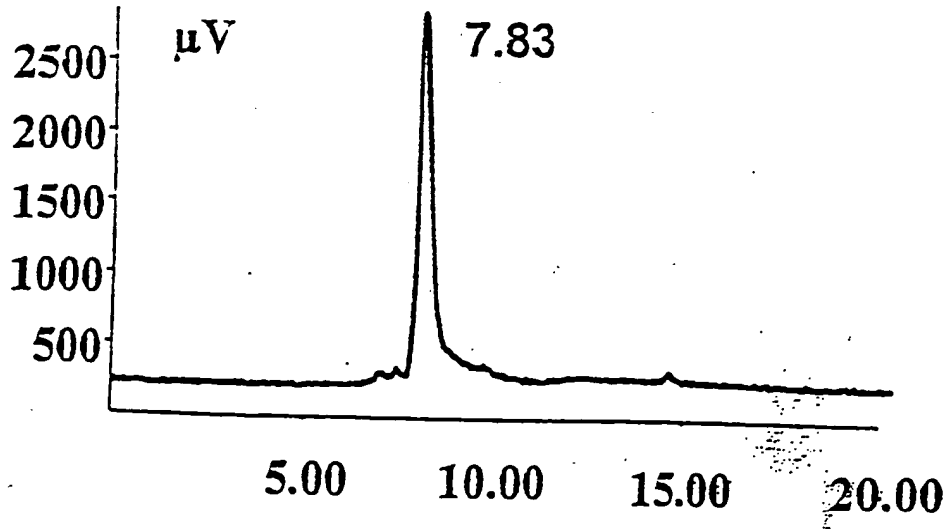
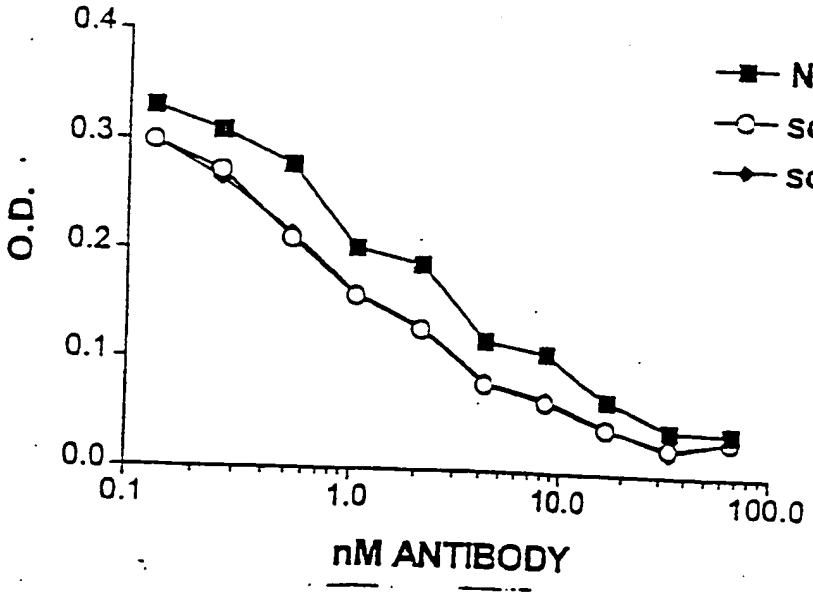


FIG. 13



% IMMUNOREACTIVITY:

97-20.0 Standard	226
98-01.0	224

FIG. 14

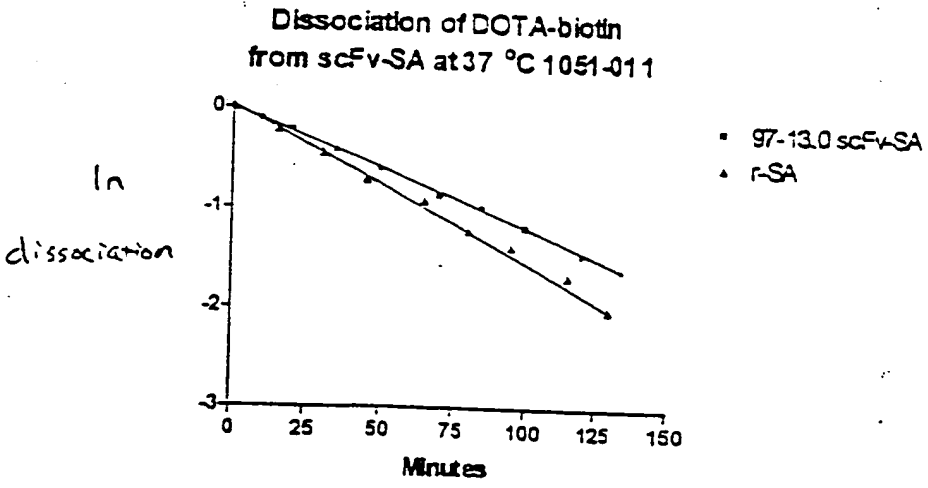


FIG. 15

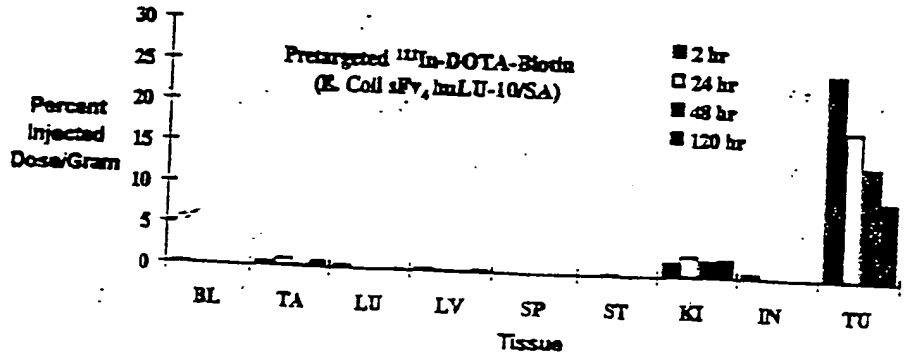


FIG. 16

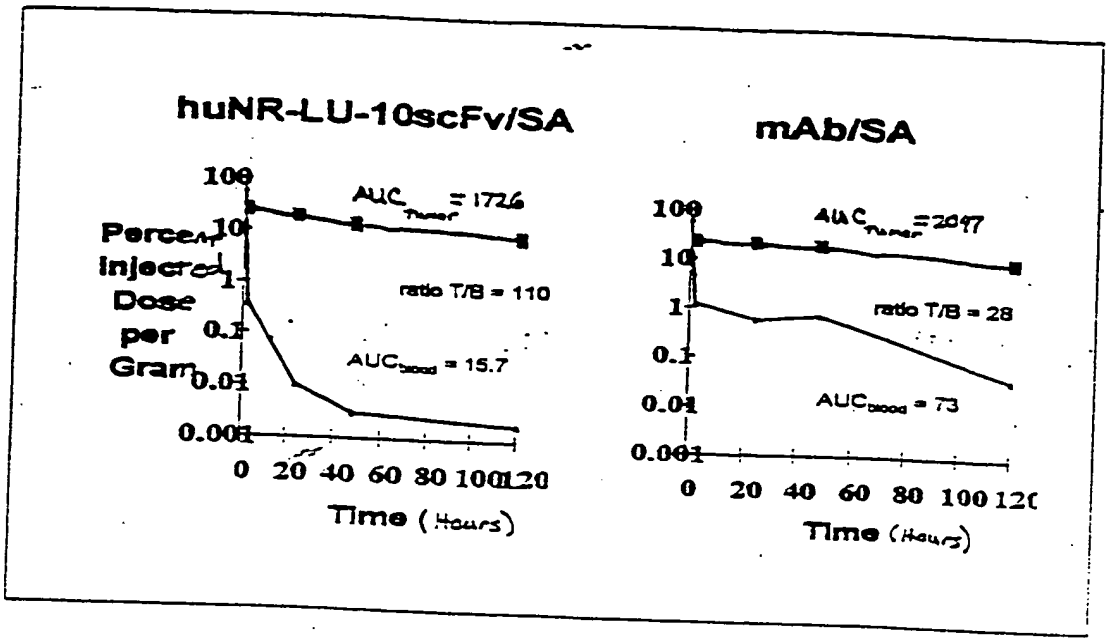


FIG. 17

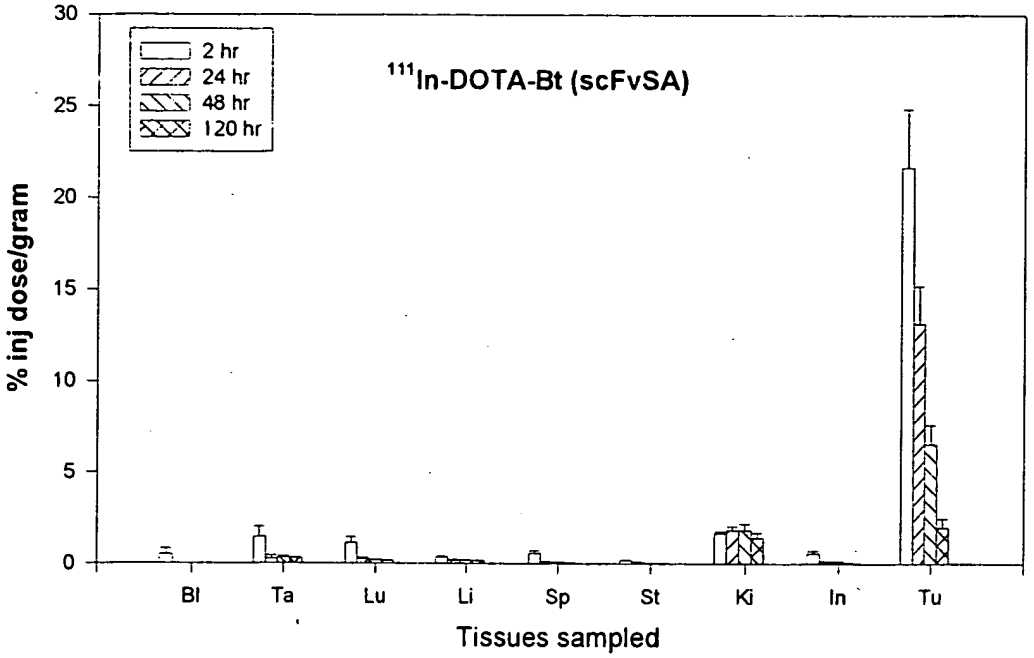


FIG. 18

. Expression of scFvSA fusion proteins with or without FkpA.

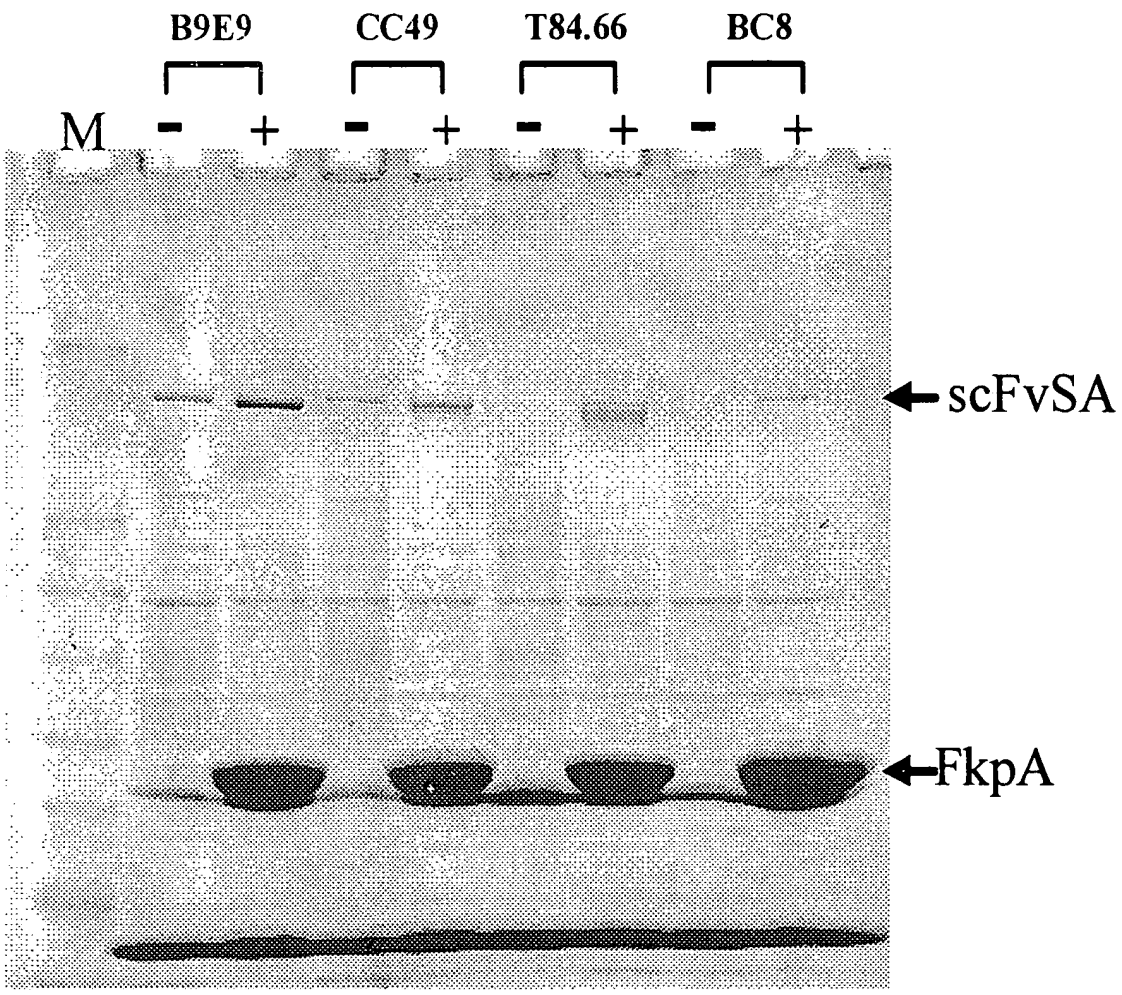


FIG. 19